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09/346,353	07/02/1999	MARIE ANGELOPOULOS	YO996-049BX	2281
7590 Thomas A. Beck Esq. 6136 West Kimberly Way Glendale, AZ 85308-7627				
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EXAMINER				
YOON, TAE H				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

09/346,353

**Applicant(s)**

ANGELOPOULOS ET AL.

**Examiner**

Tae H. Yoon

**Art Unit**

1796

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3, 6, 7, 14-16, 20, 22, 23, 25 and 47-56 is/are pending in the application.
- 4a) Of the above claim(s) 47-56 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 6, 7, 14-16, 20, 22, 23 and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Improper amendment for claim 1 is noted since "a solvent" in line 3 should not contain an underline. Also, there is no need to recite a body of claim language when a claim is cancelled. For example, "5 (cancelled)" rather than "5 (cancelled) A method ----thereof." would be a proper format. Please keep it mind this for the future communications for any application.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 3, 6, 7, 14-16, 20, 22, 23 and 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification failed to teach the recited "an acid-containing solution additive" in claims 1, 7 and 14 adequately and it would be New Matter. The examiner interprets that said "an acid-containing solution additive" would mean an acid-containing solution also containing an additive in view of the claim 3 reciting plasticizers and diluents as said additive, for example. The use of said acid-containing solution appears at page 18 of the specification, but aqueous acid solutions, not the recited "an acid-containing solution additive", are taught.

Claims 1, 3, 6, 7, 14-16, 20, 22, 23 and 25 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the method admixing an acid-containing solution and a precursor to an electrically conductive conjugated polymer, does not reasonably provide enablement for the method admixing an acid-containing solution and an electrically conductive conjugated polymer. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

The amended claims also recite an acid-doping of an electrically conductive conjugated polymer which does not have support in the specification since said electrically conductive conjugated polymer is defined as an acid-doped polymer (see lines 6-10 of page 2 of the specification).

Claims 7 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method of fabricating an electrically conductive polymer, does not reasonably provide enablement for a method of fabricating a precursor to an electrically conductive conjugated polymer. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

Claim 7 now recites "acid containing solution additive" which inherently dopes said precursor, and thus the product obtained would be an electrically conductive polymer, not a precursor to an electrically conductive conjugated polymer which is not doped.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3, 6, 7, 14-16, 20, 22, 23 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The nature of the recited "an acid-containing solution additive" is confusing and indefinite since it lacks antecedent basis in the specification as discussed above. Furthermore, it is unclear whether said "an acid-containing solution additive" would mean "an acid-containing solution", "an additive containing an acid" or "an acid-containing solution also containing an additive" or something else, especially in view of the claim 3 reciting plasticizers and diluents as said additive, for example.

Again, the recited "N1N' dimethyl propylene urea" in claims 1 and 7 is an incorrect chemical name.

Admixing of an acid-containing solution additive and an electrically conductive conjugated polymer of claims 1 and 7 is confusing and indefinite since it lacks antecedent basis in the specification since said electrically conductive conjugated polymer is already the acid-doped by the definition.

The recited "said acid-containing solution" in line 19 of claim 1 lacks antecedent basis since the line 6 recites "an acid-containing solution additive".

The lines 19-21 of claim 1 define that an acid-containing solution (additive) is a particular acid solution, but claim 3 further recites plasticizers and diluents as the

additive. Thus, it is confusing, especially in view of the fact that claim 1 recites "consisting of". The same issue is applied to claims 7 and 14.

A method of fabricating a **precursor** to an electrically conductive conjugated polymer of claim 7 is confusing and indefinite since claim 7 recites employing an acid containing solution which would yield an (doped) electrically conductive polymer, not a **precursor to an electrically conductive conjugated polymer which is not doped.**

Claim 23 recites addition of the additive in a solvent first, but it is confusing since the amended claim 1 now recites an acid-containing solution additive, not just additive.

Claim 24 recites that the admixture contains a polyaniline, said additive and an oxidant, and it is confusing and indefinite since claim 1 now recites a polymer (polyaniline), a solvent, an acid (oxidant)-containing solution additive.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 7, 14, 15, 16, 20, 22, 25 and 40-42 are rejected under under 35 U.S.C. 103(a) as obvious over Elsenbaumer (US 4,983,322) alone, or in view of Havinga et al (US 5,908,583).

Elsenbaumer teaches a method of admixing a electrical conductive polyaniline, a solvent (nitromethane) and ferric chloride (dopant) in example 3.

The instant invention further recites a different solvent and a dopant over example 3 of Elsenbaumer. However, Elsenbaumer teaches various solvents including the instant dimethylsulfoxide, dimethyl acetamide and dimethyl formamide at col. 8, lines 23-29 and thus the utilization of said solvents in the example 3 would be a *prima facie* obviousness. With respect to the acid dopant, various dopants are taught at cols. 6 and 7, and p-toluenesulfonic acid is seen at col. 7, line 7. Example 1 shows 1 M hydrochloric acid which is a dopant solution. Water in said 1 M hydrochloric acid would meet the diluents of claims 3 and 14.

The instant dopant such as camphorsulfonic acid is well known in the art as taught by Havinga et al (col. 1, lines 31-35).

Thus, it would have been obvious to one skilled in the art to utilize a solvent such as dimethylsulfoxide, dimethyl acetamide or dimethyl formamide and a dopant solution such as 1 M hydrochloric acid in the example 3 of Elsenbaumer since Elsenbaumer teaches and equates said nitromethane and dimethylsulfoxide, dimethyl acetamide or dimethyl formamide and since a strong acid such as 1 M hydrochloric acid is also well known dopant, or to further utilize camphorsulfonic acid taught by Havinga et al as a solution form in the example 3 of Elsenbaumer as a dopant since camphorsulfonic acid is well known dopant in the art and since said solution form would provide an easier and a quicker doping absent showing otherwise.

Claims 1, 3, 6, 7, 14, 15, 16, 20, 22, 25 and 40-42 are rejected under under 35 U.S.C. 103(a) as obvious over Elsenbaumer (US 4,983,322) alone, or in view of Havinga et al (US 5,908,583), and further in view of Cao et al (US 5,232,631).

Claims other than claim 6 do not need Cao et al, but included here. *See Ormco vs. Align, 498 F3d, 1307, 1319-20 (Fed. Cir. 2007)* (explaining that when dependent claims "were found to have been obvious, the broader claims ... must also have been obvious).

The instant claim 6 further recites stretching of a film over Elsenbaumer  
Cao et al show that stretching of a film is well known practice in the art as discussed previously.

Thus, stretching of film of Elsenbaumer in order to obtain an oriented film with teaching of Cao et al would have been an obvious practice to one skilled in the art at the time of invention absent showing otherwise.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the



shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tae H. Yoon whose telephone number is (571) 272-1128. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tae H Yoon/  
Primary Examiner  
Art Unit 1796

THY/February 20, 2010